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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/922,486   | 08/03/2001  | Ravi Subramanian     | 04303/100N162-US1   | 7279             |
| 38881  | 7590        | 03/22/2006           | EXAMINER            |                  |
| DARBY & DARBY P.C.<br>P.O. BOX 5257<br>NEW YORK, NY 10150-5257 |             |                      | ROBERTS, BRIAN S    |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2616                |                  |

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/922,486

Applicant(s)

SUBRAMANIAN ET AL.

Examiner

Brian Roberts

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12/27/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 1-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38-64 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

- Applicant's Amendment filed 12/27/2005 is acknowledged.

### ***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-37, drawn to a TDMA receiver, classified in class 370, subclass 347.
  - II. Claims 38-64, drawn to a radiotelephone operable on more than one system, classified in class 455, subclass 552.1.
2. Inventions of group 2 and group 1 are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the wireless electronic device does not need to operate by utilizing a TDMA wireless protocol. It can function utilizing for example IS-136, GSM, or CDMA. The subcombination has separate utility such as operating as a TDMA receiver.
3. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Laura Brutman on 3/10/2006 a provisional election was made without traverse to prosecute the invention of group 2, claims 38-64. Affirmation of this election must be made by applicant in replying to this Office action. Group 1, claims 1-37 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Objections***

6. Claim 52-57 are objected to because of the following informalities:
- In line 1 of claim 52, "wherein eaxh o fthe" should read --wherein each of--
  - Claims 53-58 are objected to as being dependent on claim 52

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2662

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 38-43 and 47-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fette et al. (US 6052600) in view of Miller et al. (US 5511067)

- In reference to claim 38, 42, 43, 51-55, 57-58, 61, 64

In Figure 2, Fette et al. teaches a software programmable radio that includes:

- Reconfigurable resources (208) that include a digital signal processor (210) (configurable channel codec processor; algorithm-specific processor) or general purpose processor (algorithm-specific processor) and/or a field programmable gate array that can alone or in combination with a processor perform processing steps such as programmed logic operations (column 4 lines 54-66)
- The digital signal processor (210) provides encoding and decoding of voice signals (column 6 lines 32-45)
- A configuration input for providing the reconfigurable resources with instructions and data from memory (206) used to configure the device to a single desired wireless communication protocol.

Fette et al. does not explicitly teach the reconfigurable resources (208) including a configurable modem processor coupled to the configurable channel codec processor (210).

In Figure 3, Miller et al. teaches a modem processor (60) (algorithm specific processor) in a wireless transceiver.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the reconfigurable resources of Fette et al. to include a modem processor of Miller et al. coupled to the digital signal processor (210) (configurable channel codec processor) and the memory (206) for each of the reconfigurable resources (208) because it would allow encoded data to be modulated according to a desired wireless communication protocol for transmission utilizing a transceiver (202) and allow the modem processor to be reconfigured according to instructions from the memory to allow the modem processor to support a desired wireless communication protocol.

- In reference to claim 39-40, 56, 59-60, 62-63

The combination of Fette et al. and Miller et al. teaches a system and method that covers substantially all limitations of the parent claims. In Figure 2, Fette et al. further teaches the reconfigurable resource configured to perform a GSM transceiver. A transceiver is configured based on software programs and/or configuration information stored in memory (206). The reconfigurable resources inherently support a variable user number and a data rate as specified in the GSM specification. (column 5 lines 1-13)

- In reference to claim 41

The combination of Fette et al. and Miller et al. teaches a system and method that covers substantially all limitations of the parent claims.

Fette et al. does not explicitly teach the reconfigurable resources (208) including a configurable modem processor directly coupled to the configurable channel codec processor (210).

In Figure 3, Miller et al. teaches a modem processor (60) in a wireless transceiver.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the reconfigurable resources of Fette et al. to include a modem processor of Miller et al. directly coupled to the digital signal processor (210) (configurable channel codec processor) because it would allow the encoded to be modulated according to a desired wireless communication protocol for transmission utilizing a transceiver (202).

- In reference to claim 47

The combination of Fette et al. and Miller et al. teaches a system and method that covers substantially all limitations of the parent claims. In Figure 1, Fette et al. teaches a software programmable radio implemented in a mobile handset (200).

- In reference to claim 48

The combination of Fette et al. and Miller et al. teaches a system and method that covers substantially all limitations of the parent claims.

The combination of Fette et al. and Miller et al. does not teach the communication radio being a test equipment platform.

Official Notice is taken that a communications radio may be implemented as test equipment platform.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify system and method of the combination of Fette et al. and Miller to include implementing the software defined radio as a test equipment platform because it would allow testing, configuration, or reconfiguration of a communications network.

- In reference to claim 49

The combination of Fette et al. and Miller et al. teaches a system and method that covers substantially all limitations of the parent claims. In Figure 2, Fette et al. teaches the wireless communication protocol is a TDMA protocol. (column 6 lines 15-22)

- In reference to claim 50

The combination of Fette et al. and Miller et al. teaches a system and method that covers substantially all limitations of the parent claims. In Figure 2, Fette et al. teaches a group of wireless communication protocols that includes GSM and CDMA. (column 6 lines 15-22)

Fette et al. does not explicitly teach the group includes IS-136.

Official Notice is taken that IS-136 is a well know mobile phone communications protocol.



It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify system and method of the combination of Fette et al. and Miller to include selecting from a group that includes the IS-136 because a communications radio implementing multiple communications protocols would mitigate cost and facilitate interoperability of communication systems that utilize different communication protocols.

9. Claims 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fette et al. (US 6,052,600) in view of Miller et al. (US 5,511,067), as applied to the parent claims, and further in view of Sharrit et al. (US 5,999,990)

- In reference to claim 44, 45, 46

The combination of Fette et al. and Miller et al. teaches a system and method that covers substantially all limitations of the parent claims. Fetter further teaches a controller coupled to the reconfigurable resources (208) and a memory coupled to the controller and the reconfigurable resources.

The combination of Fette et al. and Miller et al. does not teach the radio implemented in a base transceiver station with a BTS card controller coupled to reconfigurable resources, which include a configurable modem and configurable channel codec processor.

In Figure 1, Sharrit teaches a base station communicator with a controller (BTS card controller) (16) connected to reconfigurable radio resources (12n) and memory (18).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Fette et al. and Miller to include the radio implemented in a base station and the controller (BTS card controller) coupled directly to the reconfigurable resources and memory as taught by Sharrit because it would mitigate cost and facilitate interoperability because the base station could reconfigure the reconfigurable resources via instructions from memory to allow the base station to select a wireless communication protocol from multiple wireless communication protocols to support multiple handsets utilizing different wireless communication protocols.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 37-64 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2662


mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Roberts whose telephone number is (571) 272-3095. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BSR  
03/14/2006



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